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Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                    NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A_Geneseq_36:*

1: /SIDS1/gcgda
2: /SIDS1/gcgd
3: /SIDS1/gcgd
4: /SIDS1/gcgd
5: /SIDS1/gcg
6: /SIDS1/gc
7: /SIDS1/gc
8: /SIDS1/gc
9: /SIDS1/gc
10: /SIDS1
11: /SIDS1
11: /SIDS
13: /SIDS
13: /SIDS
14: /SID
15: /SI
17: /S
18: /S
19: /S
20: /SIDS1/gc
19: /SIDS1/gc
19: /SIDS1/gc
10: /SIDS1/gc
11: /SIDS1/gc
12: /SIDS1/gc
13: /SIDS1/gc
14: /SIDS1/gc
14: /SIDS1/gc
15: /SIDS1/gc
16: /SIDS1/gc
16: /SIDS1/gc
17: /SIDS1/gc
18: /SIDS1/gc
19: /SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
DB
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   seq
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length: 2000000000
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Match Length DB
   100.0
100.0
92.7
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92.7
27.1
25.9
20.3
20.0
19.4
19.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
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Gapop 10.0 , Gapext 0.5
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343
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           March 1, 2001, 15:47:24 ; Search time 210.42 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TENPCAQRCLQSCQQEPDDL.....DTGATNQRHPPGERTRGRQP
   614
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Y25657
W62838
Y40999
W62830
W62829
R74175
W62832
R71380
                                                                                                                                                                                                                                   W22149
W62834
W22150
Y15244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments)
9.750 Million cell updates/sec
                                              Peanut allergen Ar
Arachis hypogaea a
Peanut allergen Ar
Peanut allergen 11
Glycine max antimi
Soybean beta-congl
Macadamia integrif
Macadamia integrif
Human collapsin.
                                                                                                                                                                                                                                                                                                                                                                 Description
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9	59.5	9	9	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	0.	0	0	0		ω	64	64	64.5	6
	17.3	•	٠	•	•	٠	•	٠	٠			٠	٠		٠	٠	٠			٠	٠		٠	٠				٠	8	18.7	8	9
1013	1013	1013	318	419	419	419	419	419	419	419	419	419	419	399	350	350	350	318	307	302	297	292	1761	1105	777	777	149	\sim	w	1036	9	9
19	19	19	20	21	20	20	20	19	19	18	18	18	18	20	20	20	16	20	20	20	20	20	20	20	21	20	80	20	21	21	19	19
W40224	W40223	W61539	Y38613	Y70982	W86203	Y22320	Y30518	W75740	W75751	W11478	W13833	W00932	W17837	W86237	Y22321	Y30519	R82686	Y08284	W86222	W86223	W86224	W86225	Y15457	Y15459	Y99427	Y27127	P70057	_	10	Y82776	~	Y21264
Human tolloid-like	Murine mTll protei	n card	Neisseria gonorrho	vascular	3	gth human	Vascular endotheli	Human vascular end	_	vascular	vascu	.Flt4 re	foetal	Human VEGF-C full	Truncated human VE	vascu	Vascular endotheli		VEGF-C	VEGF-C t	VEGF-C	VEGF-C t	n lamini	5 of wo	PRO149	ı brain t		laminin c	secreted	Human chordin rela	œ	Human semaphorin I

ALIGNMENTS

Peanut allergen Ara hI.

29-DEC-1997 (first entry)

W22149 standard; Protein; 614 AA

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Key
Peptide
                                                                                                                                                                       Peanut; seed storage protein; allergen; allergy; hypersensitivity; vaccine; anaphylactic shock; immunotherapy; therapy; monocional antibody; EDISA; analysis; Ara hl.
                      04-MAR-1996;
29-DEC-1995;
                                                                                                                    Protein
                                                                                                                                                           Arachis hypogaea strain Florunner.
       (UYAR-) UNIV ARKANSAS.
                                                             10-JUL-1997
                                                                                                    Modified-site
                                                                             WO9724139-A1
                     96US-0610424
95US-0009455
                                              96WO-US15222
                                                                                                                     /label= Sig_peptide
23..614
                                                                                                                                          Location/Qualifiers
                                                                                                           /label= Mat_protein
                                                                                             /note=
                                                                                           "N-glycosylation
                                                                                            site
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Gossypium hirsutum Human semaphorin

0

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RESULT
W62834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SXCCCCCCCCCCCXSXTTXRRX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This polypeptide comprises major peanut allergen Ara hI (W22149).

CITE sequence was deduced from cDNA clone P17 (T76612), isolated from cDNA clone P17 (T76612), isolated from cDNA using a primer (see T76616) based on an isolated Ara hI peptide (see W24206). The sequence shows significant homology with the vicilin family of seed storage proteins of other legumes. The allergen is recognised by serum IGE from a large proportion of individuals with peanut the hypersensitivity. Ara hI and Ara hII (see W24164) can be used to raise monoclonal antibodies which are used in a specific two-site MAD ELISA for the detection of Ara hI or Ara hII (claimed). IgE-binding Ara hI antigen epitopes (see W24165-87) may be used in vaccines to protect against allergic reactions to peanut allergens, e.g. anaphylactic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                       The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                  Claim 1; Page 55-57; 96pp; English.
                                                                                              Novel anti-microbial protein from e.g. Macadamia useful for controlling microbial infestations of
                                                                                                                                         WPI; 1998-377279/32
                                                                                                                                                                     Bower NI,
                                                                                                                                                                                                                                                                                                                                            Arachis hypogaea
                                                                                                                                                                                                                                                                                                                                                                       antimicrobial protein; infestation; control
                                                                                                                                                                                                (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                           22-DEC-1997;
                                                                                                                                                                                                                                                                                     02-JUL-1998
                                                                                                                                                                                                                                                                                                                 W09827805-A1
                                                                                                                                                                                                                                                                                                                                                                                                 Arachis hypogaea antimicrobial protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W62834 standard; Peptide; 614 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; T76612.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bannon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            two-site monoclonal antibody based ELISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peanut allergens Ara hI and Ara hII - used for vaccination and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYDTGATNQRHPPGERTRGRQP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ພ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-363453/33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                     Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      614 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Burks AW,
                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                             96AU-0004275
                                                                                                                                                                                                                                                           97WO-AU00874.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 343; DB 18; 100.0%; Pred. No. 1.3e-32; +ivo 0: Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cockrell G,
                                                                                                                                                                    Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                    Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Helm RM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stanley JS;
                                                                                                                                                                     Marcus
                                                                                             integrifolia plants or man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614;
                                                                                                mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                             significant homology with the vicilin family of seed storage proteins of other legumes. The allergen is recognised by serum IgE from a large proportion of individuals with peanut hypersensitivity. Ara hI and Ara hII (see W24164) can be used to raise monoclonal antibodies which are used in a specific two-site MAB ELISA for the detection of Ara hI or Ara hII (claimed). IgE-binding Ara hI antigen epitopes (see W24165-87) may be used in
                                                                                                                                                                                                      Claim 31; Page 172; 354pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peanut; seed storage protein; allergen; allergy; hypersensitivity; vaccine; anaphylactic shock; immunotherapy; therapy; monoclonal antibody; ELISA; analysis; Ara hI.
                                  vaccines to protect against allergic reactions to peanut allergens
                                                                                                                                                                                                                              Peanut allergens Ara hI and Ara hII – used for vaccination and in two-site monoclonal antibody based ELISA \,
                                                                                                                                                                                                                                                                                                           Bannon GA,
                                                                                                                                                                                                                                                                                                                                                              04-MAR-1996;
29-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                       This polypeptide comprises major peanut allergen Ara hI (W22). Its sequence was deduced from cDNA clone P41b (T76613), isolation peanut seed cDNA using a primer (see T76616) based on an isolated Ara hI peptide (see W24206). The sequence shows
                                                                                                                                                                                                                                                                                                                                    (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                   23-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9724139-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arachis hypogaea strain Florunner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peanut allergen Ara hI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-DEC-1997 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W22150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W22150 standard; Protein; 626 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                           10-JUL-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                       .g. anaphylactic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                  1997-363453/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                614
                                                                                                                                                                                                                                                                                                           Burks AW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                            96US-0610424
95US-0009455
                                                                                                                                                                                                                                                                                                                                                                                                 96WO-US15222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= Sig_peptide
23..626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= Mat_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                             Cockrell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 343; DB 19;
Pred. No. 1.3e-32;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                           ر<sub>0</sub>
                                                                                                                                                                                                                                                                                                           Helm RM,
                                                                                                                                     The sequence shows
                                                                                                                                                                                                                                                                                                           Stanley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                           JS;
                                                                                                                                                                 (W22149).isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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Sequence

626 AA

Length 626;

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QY
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Y15244
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 58
                                                                        Query Match 92.7
Best Local Similarity 90.6
Matches 58; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-AUG-1998;
31-JAN-1998;
13-FEB-1998;
13-FEB-1998;
                                                                                                                                                                                                                                             By modifying the IgE binding sites the ability of the allergen to provoke an immune response is downregulated. The epitopes of the IgE binding sites can therefore be modified in genetically engineered plants and animals to elicit less of an allergic response.
                                                                                                                                                                                                                                                                                                                                                                This is the amino acid sequence of the Ara h 1 protein from Arachis hypogea. The Ara h 1 protein has 23 IgE (Immunoglobulin E) binding epitopes, four of which are immunodominant (Y15247, Y15249, Y15250)
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 allergies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-479189/40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SOSI/)
(UYAR-)
(UYNY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                 Y15263)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 35-37; 46pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified allergen with reduced IgE binding, useful for treating e.g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arachis hypogea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y15244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y15244 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peanut allergen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            allergy; immune response; transgenic;
immunoglobulin E; Ig E; binding site;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94 grqp
1 TENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYD----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCYYD----TGATNQRHPPGERTR 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRQP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tenpcaqrclqscqqepddlkqkacesrctkleydprcvydprghtgttnqrsppgertr 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UNIV NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOSIN i.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                   626 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Burks AW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0141220.
98US-0073283.
98US-0074590.
98US-0074624.
98US-0074633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US02031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ara h 1, amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein;
                                                                                                 92.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MT SINAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sampson
                                                                        Score 318; DB
Pred. No. 1.2e
0; Mismatches
                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 318; DB 18;
Pred. No. 1.2e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCHOOL MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peanut.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  allergen; epitope;
                                                                        DB 20;
L.2e-29;
nes 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
                                                                                                                        Length 626;
                           TGATNORHPPGERTR 56
                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                        4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
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34

Best Loc Matches

Local

Similarity

Conservative

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Gaps

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RESULT
Y25657
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
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                                                                                                                                                                      CC polypeptide allergen and comprises administering to the patient to a comprises administering to the patient a peptide comprise administering to the patient and peptide comprise and the comprise and t
                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Major histocompatibility complex; class II; desensitising; human; allergen; grass; tree; weed; pollen; fungi; mould; food; insect; sting; chiromidae; spider; mite; housefly; fruit fly; sheep blow fly; honeybee; screw worm fly; grain weevil; silkworm; bee moth; larvae; mealworm; cat; cockroach; beetle; dog; horse; cow; pig; sheep; rabbit; rat; guinea pig; mice; gerbil; vaccine; treatment; prevention; hypersensitivity; peanut.
                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-SEP-1998;
09-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 6; Page 70-71; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desensitizing patients to polypeptide allergens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9934826-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y25657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (IMCO-) IMPERIAL COLLEGE INNOVATIONS LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arachis hypogea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peanut allergen 1168391 Ara h I protein fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Y25657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94 grqp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57 GRQP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98GB-0020474
98GB-0000445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-GB00080
                               92.7%;
90.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            626
Score 318; DB Pred. No. 1.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AΑ
                            ± 318;
1.
  DB 20;
L.2e-29;
les 2;
                                                    Length 626;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93
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57

GRQP

60

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RESULT
Y40999
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W62838
ID W6
                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Watches 22; Conserv
                                                                                                                                                                 В
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                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                          В
        Glycine max
                           allergic reaction;
                                                                                             Y40999;
                         Peanut; allergen; Ara H 1; IgE; immunoglobulin allergic reaction; soybean; beta-conglycinin.
                                                     Soybean beta-conglycinin protein sequence
                                                                          06-DEC-1999
                                                                                                                                                                                                                                                                                                                    The sequence is that of an antimicrobial protein which be used to control microbial infestations in plants and
                                                                                                                                                                                                                                                                                                                                                                  Novel anti-microbial protein from e.g. Macadamia integrifolia useful for controlling microbial infestations of plants or mammals \ensuremath{\mathsf{N}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glycine max.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glycine max antimicrobial protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W62838;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W62838 standard; Protein; 605 AA
                                                                                                              Y40999 standard; protein; 605
                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-377279/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                      (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9827805-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-OCT-1998
                                                                                                                                                                                   51
                                                                                                                                                                                                    31
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                                                                                                                                                               84 erepgqpgek 93
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                                                                                                                                                                                                    enpkhnkclqscnserdsyrnqacharcnllkvekeeceegeiprpr----prpqhp 83
                                                                                                                                                                                                                       ENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYD------PRCVYDTGATNQRHP 50
                                                                                                                                                                                  -----PGER 54
                                                                                                                                                                                                                                                                                                                                                 Page 63-65; 96pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                    Goulter KC,
                                                                                                                                                                                                                                                                                          605 AA;
                                                                                                                                                                                                                                          Conservative
                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein; infestation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-AU00874
                                                                                                                                                                                                                                                                                                                                                                                                                                                         96AU-0004275
                                                                                                                                                                                                                                                    27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                  Green JL,
                                                                                                                                                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                          8;
                                                                                                                                                                                                                                         Score 93; DB 19;
Pred. No. 0.0035;
8; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                   Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        control
                                                                                                                                                                                                                                                              DB 19;
                                                                                                                                                                                                                                          16;
                                   E)
                                                                                                                                                                                                                                                           Length 605;
                                                                                                                                                                                                                                                                                                                                                                                                                    Marcus JP;
                                   epitope; Ara h
                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                      and mammalian
                                                                                                                                                                                                                                                                                                                               can
                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                                                          Gaps
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RESULT
W62830
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                                                                                                                                                                                                                                                                                                                                                                                                                                     XAXX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention provides a tertiary structure for the peanut allergen Ara H I. The Ara H I allergen is found to contain 23 linear IgE-binding epitopes. The invention also provides an isolated recombinant peanut allergen designated Ara h 3 and a nucleotide molecule encoding the peanut allergen Ara h 3. Molecules of the invention are used to protect a host animal from allergic reaction, particularly using a modified allergen which is less reactive with IgE. The invention may also be used to ensure that the allergen is not introduced into genetically modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tertiary structure of peanut allergen animal from allergic reaction -
22-DEC-1997;
                                              02-JUL-1998
                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                      Macadamia integrifolia.
                                                                                                                                                                                                                                                                                                                                                       antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                         Macadamia integrifolia antimicrobial protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W62830;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W62830 standard; Protein; 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Fig 33A-B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-551218/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Burks W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAR-1998;
11-MAR-1999;
                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYAR-) UNIV ARKANSAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9945961-A1
                                                                                                  √09827805-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Si
hes 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84 erepgqpgek 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31 knpkhnkclqscnserdsyrnqacharcnllkvekeeckkgeiprpr-----prpqhp 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 ENPCAQRCLQSCQQEPDDLKQKACESRCTKLEYD------PRCVYDTGATNQRHP 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----PGER 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents a soybean beta-conglycinin protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helm RM, Cockrell G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                605 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.9%; ilarity 30.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compadre
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                       protein;
97WO-AU00874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0077763
99US-0077763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US05494
                                                                                                                                                                           29.
                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                    /note=
                                                                                                                                                                                                   /note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193pp; English.
                                                                                                                                                                                                                                                                                                                                                       infestation; control
                                                                                                                                                 "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 89; DB Pred. No. 0.01 9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bannon GA,
SK, Maleki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ara h 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 20; Length 605;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stanley JS, S
SJ, Kopper RA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shin DS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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RESULT
W62829
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 12; Conser
The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-377279/32.
N-PSDB; V42316.
                             Claim 1; Page 39-41; 96pp; English.
                                                                                 WPI; 1998-377279/32.
N-PSDB; V42311.
                                                                                                                                                                                                                     W09827805-A1
                                                                                                                                                                                                                                                                                                      Macadamia integrifolia
                                                                                                                                                                                                                                                                                                                        antimicrobial protein; infestation;
                                                                                                                                                                                                                                                                                                                                                                                                          W62829 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel anti-microbial protein from e.g. Macadamia integrifolia useful for controlling microbial infestations of plants or man {\tt man}
                                                 Novel anti-microbial protein from useful for controlling microbial i
                                                                                                              Bower NI, Goulter KC,
                                                                                                                                                        20-DEC-1996;
                                                                                                                                                                             22-DEC-1997;
                                                                                                                                                                                                 02-JUL-1998.
                                                                                                                                                                                                                                                    Protein
                                                                                                                                                                                                                                                                                                                                            Macadamia integrifolia antimicrobial protein
                                                                                                                                                                                                                                                                                                                                                                   27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 43-45; 96pp;
                                                                                                                                    (RETR-) COOP
                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bower NI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 cqrrckeiceeeeeynrqrdpqqqyeqcqkrcqrretepr 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAQRCLQSCQQEPDDLKQK------ACESRCTKLEYDPR 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        625 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                    RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                            97WO-AU00874
                                                                                                                                                        96AU-0004275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96AU-0004275.
                                                                                                                                                                                                                                                  /note= "signal peptide"
29..666
                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                          Protein; 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20.3%;
                                                                                                                                                                                                                                        "mature protein"
                                                                                                              Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 69.5; DI Pred. No. 2.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                 n e.g. Macadamia infestations of
                                                                                                              Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Manners JM,
                                                                                                                                                                                                                                                                                                                        control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                Marcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Marcus
                                                 integrifolia -
plants or mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                JP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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R74175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 12
                                   Ouery Match
Best Local Similarity 35.2
Matches 19; Conservative
                                                                                                                 An antibody capable of specifically binding at least a portion of the collapsin protein can be used to purify human collapsin and to inhibit the activity of the protein. It can be used to induce neurite outgrowth by neuronal cells and to treat individuals
                                                                                                                                                                                    collapsin, to nerve damage.
                                                                                     Sequence
                                                                                                        suffering from nerve
                                                                                                                                                                Claim 2; Columns 15-18; 11pp; English
                                                                                                                                                                                                                                                                                                                                                                                Binding-site
                                                                                                                                                                                           New antibody to human collapsin - used to inhibit the activity of collapsin, to induce neurite out-growth and to treat individuals with
                                                                                                                                                                                                                                   WPI; 1995-193478/25
                                                                                                                                                                                                                                                                                                              15-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                             Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                Collapsin; antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human collapsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R74175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R74175 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   animals
                                                                                                                                                                                                                                                     Luo Y,
                                                                                                                                                                                                                                                                        (UYPE-) UNIV PENNSYLVANIA
                                                                                                                                                                                                                                                                                           15-OCT-1993;
                                                                                                                                                                                                                                                                                                                                 16-MAY-1995.
                                                                                                                                                                                                                                                                                                                                                    US5416197-A
                                                                                                                                                                                                                                                                                                                                                                                                 Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
278 aqlplhrc----diygkacaecc--lardpycawdgsacsryfptakrrtrrq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102 cqrrckeiceeeeeynrqrdpqqqyeqcqercqrhetepr
                   6 AQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYDTGATNQRHPPGERTRGRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 CAQRCLQSCQQEPDDLKQK------ACESRCTKLEYDPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 Similarity 30.0
                                                                                                                                                                                                                          Q92331.
                                                                                                                                                                                                                                                     Raper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                666
                                                                                       477 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                      JA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                           93US-0136922
                                                                                                                                                                                                                                                                                                              93US-0136922
                                                                                                                                                                                                                                                                                                                                                                             /note= "antibody binding site" 51.65
                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 9..19
                                                                                                                                                                                                                                                                                                                                                                      /note= "antibody binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
                                               19.4%;
                                                                                                        damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                      Score 66.5; D: Pred. No. 3.6; S; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 68.5;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                .6;
                                                                                                                                                                                                                                                                                                                                                                      site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 19;
                                                       , 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
                                       23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
                                                        Length
                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 666;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                          477;
                    59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                       Gaps
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RESULT 12
R71380
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W62832
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                     Semaphorin; grasshopper; human; vaccinia virus; Drosophila; Tribolium; wariola major virus; smallpox; semaphorin receptor binding activity; modulation; nerve cell growth; immune response; viral pathogenesis;
     13-SEP-1993;
                                                    13-SEP-1994;
                                                                                                                                                  W09507706-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel anti-microbial protein from e.g. Macadamia integrifolia - useful for controlling microbial infestations of plants or mammals
                                                                                                     23-MAR-1995
                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                  neurological
                                                                                                                                                                                                                                                                                                                                                                             Human semaphorin III protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                  21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R71380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R71380 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 49-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-377279/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gossypium hirsutum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antimicrobial protein; infestation; control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gossypium hirsutum antimicrobial protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W62832;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W62832 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105 cggrclkrfegegggsgrgfgecgghchggegrpekkggcvrecrekygenpwrger 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 CAQRCLQSCQQEPDDLKQ--KACESRCTKLEYDP----RCVYDTGATNQRHP-PGER 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        590 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                        disease;
93US-0121713
                                                    94WO-US10151.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96AU-0004275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-AU00874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96pp; English
                                                                                                                                                                                                                                                  neuro-regeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 66.5; D:
Pred. No. 4.5;
10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                  oncological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and mammalian
                                                                                                                                                                                                                                                  pathogenesis; infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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Y21264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 19.4%;
Best Local Similarity 35.2%;
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer; frameshift mutation; age-related disease; neurodegenerative disorder; Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal; Huntington's disease; multiple sclerosis; alcoholic liver disease; diabetes mellitus type II; microtubule associated protein; Tau; Big Tau biquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M; neurofilament-T; presentlin II; presentlin II; HUPF-1; billar gracidic protein; GFAP; p53; semaphorin III; HUPF-1; bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A; britantic distributions of the protein and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence of the human semaphorin III protein. The proteins encoded by the grasshopper semaphorin I (08741), human semaphorin III, vaccinia virus semaphorin IV (087443), Drosophila semaphorin I and II (087444-5), Tribolium semaphorin I (087446) or variola major (smallpox) virus semaphorin IV (08747) genes were used to generate a series of peptides (R70370-R70418), which retain semaphorin receptor binding activity. The semaphorin derived or semaphorin receptor derived peptides are potent modulators of nerve cell growth, immune responsiveness and with patternation of the process of the semaphorin contains the semaphorin receptor derived peptides.
                                                    (UYUT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              viral pathogenesis. They can be used in diagnosis and treatmeneurological disease and neuro-regeneration, immune modulation diagnosis and treatment of viral and oncological infection and
                                                                                                                                                                                                                                                                                                                                                                                                                    high mobility group protein-C; neuroendocrine specific protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human semaphorin III wild type protein fragment 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y21264 standard; Protein; 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New class of semaphorin peptide(s) and polypeptide(s) - potent modulators of nerve cell growth and regeneration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                  10-APR-1997;
                                                                                                                                                                                                                                                 15-OCT-1998
                                                                                                                                                                                                                                                                                                        WO9845322-A2
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 60-63; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-131177/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bentley
                          (UYRO-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     510 aglplhrc----diygkacaecc--lardpycawdgsacsryfptakrrtrrq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Connor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 AQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYDTGATNQRHPPGERTRGRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    )r T;
                    RIJKSUNIV UTRECHT.
ROYAL NETHERLANDS ACAD ARTS & SCI.
UNIV ROTTERDAM ERASMUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             771 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goodman CS,
                                                                                                                                  97US-0043163
                                                                                                                                                                                          98WO-IB00705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   They can be used in diagnosis and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kolodkin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 66.5; Di
Pred. No. 6;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matthes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 infection and diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Big Tau;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at an early stage. It is based on the observation that disease may be caused by mutations in RNA rather than DNA. The invention describes the used of neuronal system RNA molecules, specifically proteins including beta-amyloid precursor protein (beta-APP), the microtubule associated proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule associated section (GFAP), neurofilament-L, neurofilament-M, neurofilament-F, presenilin I, presenilin II, plial fibrillary acidic protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma 2 (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group protein-C (HMGP-C) and neuroendocrine specific protein A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes a novel method for the diagnosis of a disease caused by, or associated with, an RNA molecule that has a frameshift mutation. The method is used diagnose age-related diseases, especially cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's disease, Down's syndrome, myotonic dystrophy, Huntington's disease, multiple sclerosis, alcoholic liver disease, diabetes mellitus type II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and many others listed) or susceptibility to these disorders. The method allows a definitive diagnosis of Alzheimer's disease in living patients,
(RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                  20-DEC-1996;
                                                                                                  02-JUL-1998
                                                                                                                                                                                 Protein
                                                                                                                                                                                                                                                                 Macadamia integrifolia
                                                                                                                                                                                                                                                                                              antimicrobial protein; infestation; control
                                                                                                                                                                                                                                                                                                                               Macadamia integrifolia antimicrobial protein
                                                                                                                                                                                                                                                                                                                                                                   27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                    W62828;
                                                                                                                                                                                                                                                                                                                                                                                                                                   W62828 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Diagnosing disease by detecting frameshift mutations in RNA or corresponding protein mutations - used to diagnose cancer and neurological diseases, particularly Alzheimer's disease, and also
                                                                 22-DEC-1997;
                                                                                                                                 WO9827805-A1
                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Figure 16; 258pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-609901/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Burbach JPH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                535 aqlplhrc----diygkacaecc--lardpycawdgsacsryfptakrrtrrq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 AQRCLQSCQQEPDDLKQKACESRCTKLEYDPRCVYDTGATNQRHPPGERTRGRQ 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  treatment and prevention with specific ribozymes or wild-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity 35.:
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   796 AA;
                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grosveld
                                96AU-0004275
                                                               97WO-AU00874
                                                                                                                                                                                 /note= "signal peptide"
29..666
                                                                                                                                                                /note=
                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.4%;
                                                                                                                                                              "mature protein'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FG,
                                                                                                                                                                                                                                                                                                                                                                                                                                   666
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 66.5;
Pred. No. 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                       Jacobs K,
Treacy M,
                                                      New polynucleotides encoding secreted human proteins, useful for treating e.g. broken bones, craniofacial defects, peridontal disease, osteoporosis, burns, incisions or ulcers -
                                                                                                                                                                                                                                                                                                                                           differentiation; TGF-Beta; angiogenesis; chemotaxis;
chemoattraction; collagen synthesis; fibrosis; cell adhesion;
cell migration; fertility; reproduction; haematopoiesis;
                                                                                                                                                                                                                                                                                                                                                                           periodontal disease; osteoporosis; burn; incision; ulcer; astrocyte; glial cell; transplantation; nerve; epidermis; astrocyte; brain; lung; cardiac; pancreas; kidney; growth;
                                  Claim
                                                                                                                                                                                                  10-AUG-1998;
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                                                                                                                                                                                                            24-FEB-2000
                                                                                                                                                                                                                                                                                                                                 erythroid cell;
                                                                                                                                                                                                                                                                                                                                                                                                                Chordin related protein; cartilage;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Human chordin related protein (Clone dj167_19).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y82776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y82776 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 34-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel anti-microbial protein from useful for controlling microbial i
                                                                                                                                                                          (GEMY ) GENETICS INST INC
                                                                                                                                                                                                                                     10-AUG-1999;
                                                                                                                                                                                                                                                                                  WO200009551-A1
                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-377279/32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102 cqrrckeiceeeeeynrqrdpqqqyeqcqkhcqrretepr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 CAORCLOSCOOEPDDLKOK-----ACESRCTKLEYDPR
                                                                                                       2000-205978/18
DB; Z93172.
                                21; Page 94-98; 105pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 27.1
11; Conservative
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                                                                                                                                        Diblasio-smith
                                                                                                                                                     мссоу ЈМ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               666 AA;
                                                                                                                                                                                                 98US-0095880
99US-0306111
                                                                                                                                                                                                                                     99WO-US18117
                                                                                                                                                                                                                                                                                                                               tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein; 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18.8%;
27.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96pp; English
                                                                                                                                                     Lavallie ER,
                                                                                                                                                                                                                                                                                                                                dietary supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Green JL,
                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 64.5;
Pred. No. 8.
                                                                                                                                        Widom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n e.g. Macadamia infestations of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Manners
                                                                                                                                       Collins-racie LA, A;
                                                                                                                                                                                                                                                                                                                                                                                                               bone; connective tissue;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .8
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                                                                                                                                                                                                                                                                                                                               growth medium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         integrifolia -
plants or mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
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                                                                                                                                                  Merberg D;
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                                                                                                                                                                                                                                                                                                                                                                                        neuron;
muscle;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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The human chordin related protein and polynucleotides encoding them are predicted to have biological activities which would make them

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cells, to enhance growth and/or differentiated cell populations, such as embryonic cells, or stem cells, to enhance growth and/or differentiation of the cells.

The proteins may also have other useful properties characteristic of the TGF beta superfamily of proteins. Such properties include angiogenic, chemotactic, and/or chemoattractant properties, and cells including induction or inhibition of collagen or synthesis, fibrosis, differentiation responses, cell proliferative responses, and responses involving cell adhesion, migration, and extracellular matrices. These properties make the proteins potential agents for wound healing, reduction of fibrosis, and reduction of scar tissue formation. Chordin-related proteins may also be useful for advancement of the onset of fertility in sexually immature mammals, so as to increase the lifetime reproductive performance of domestic animals such as cows, sheep and pigs. Chordin-related proteins may also be useful in modulating hematopoiesis by inducing the differentiation of erythroid cells, for suppressing the development of gonadal tumors, or for augmenting the activity of the content of gonadal tumors, or for augmenting the activity of the content of suppressing the content of suppressing the cativity of the content of the content of suppressing the cativity of the content of suppressing the ca
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 decrease in neuronal survival and repair. The proteins may also be useful for the treatment of conditions related to other types of tissue, such as nerve, epidermis, muscle, and other organs such as liver, brain, lung, cardiac, pancreas, and kidney tissue. The proteins may further be useful for the treatment of relatively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         affect neuronal, astrocytic, and glial cell survival and therefore useful in transplantation and treatment of conditions exhibiting a
Sequence
                                                                                                                                                         BMPs. The proteins may also have value as a dietary supplement, or as a component of cell culture media.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease, defects in the periodontal ligament or attachment apparatus, damage to the periodontal ligament or attachment apparatus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   osteoporosis, burns, incisions or ulcers. The proteins may also
1036 AA;
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В δÃ Query Match 18.7%; Best Local Similarity 29.1%; Matches 16; Conservative 153 efpsqdmclsalkrieeekpdcskarce----vqfsprcpedsvliegyappge 202 2 ENPCAORCLOS ---- COOEPDDLKOKACESRCTKLEYDPRCVYDTGATNORHPPGE 53 φ, Score 64; DB 21; Length 1036; Pred. No. 16; B; Mismatches 23; Indels 8 Gaps 2

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